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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,741

01/19/2006

Derek Turner

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28886

7590

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EXAMINER

MAI, HAO D

ART UNIT

PAPER NUMBER

3732

MAIL DATE

DELIVERY MODE

10/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,741	Applicant(s) TURNER, DEREK	
	Examiner Hao D. Mai	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 15-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 33 and 34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01/31/2007 and 06/20/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group 1, claims 1-14 and 33-34 in the reply filed on 08/02/2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 15-32 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1, 4, 6-9, 12, and 14, are rejected under 35 U.S.C. 102(b) as being anticipated by Quinn (5924865)**

Regarding claims 1 and 7, Quinn discloses a handpiece 1 comprising: a handle/body 3, a drive head 7 containing a driven gear 47 for rotation about an axis, and a pair of axially spaced apart bearings 43 and 45 (Fig. 1-2; column 4 lines 36-67). In a disclosed alternative variation, the driven gear 47 could be replaced with a turbine along with a system for delivering an operating fluid, e.g. air, to the head such that the bur would be fluid/air driven rather than gear driven (column 8 lines 60-64).

Driven gear or turbine 47 is further disclosed to be combined with chuck 13, providing an axial bore/tube 41 for receiving a shaft 17 of a tool/bur 15 insertable into the handpiece (Fig. 1). Shaft 17 of tool 15 has a top portion 19-22 of non-circular cross-section.

Handpiece 1 is also disclosed to include a torque transfer arrangement that comprises a locking socket 91 having a complementary cross-section to the non-circular cross-section portion 19-22 of shaft 17. The complementary cross-section is formed of arm/protrusion 65 (Fig. 1-2).

Regarding claims 4, 8-9, and 12, arm/protrusion 65 extends radially inwardly into bore 41 of the hollow spindle/chuck 13 for locking the shaft portion 19-22 of the tool 15 (Fig. 1-2). The shaft portion 19-22 is shown to be a terminal portion of shaft 17.

Regarding claims 6 and 14, arm/protrusion 65 along with push button 105 allows for a mechanism that releasably retains bur 15 (Fig. 1-2; column 7 lines 22-32).

Regarding claim 33, bur 15 is shown to have a working tip and a shaft 17 for insertion into handpiece 1, the shaft includes a portion 19-22 of non-circular cross section (Fig. 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quinn(5924865) in view of Helfenbein (2004/0161723 A1).**

Quinn discloses a handpiece according to claims 1 and 7 (see rejection above). However, Quinn fails to disclose the locking socket being integrated into the turbine. Helfenbein discloses a handpiece comprising a drive gear 9 to rotate tool 3. Drive gear 9 has an integrated extension

Art Unit: 3732

11 that corresponds to the outer contour of the bulge 10 of tool 3, forming a positive-locking socket combination (Fig. 1; paragraph 20). It would have been obvious to one having ordinary skill in the art at the time the invention was made to integrate into Quinn's drive gear or turbine a locking socket so that the torque transmitted from the gear or the turbine to the tool via the integrated locking socket would experience no weakening as explicitly taught by Helfenbein.

6. Claims 3, 11, and 34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Quinn (5924865) in view of Cardarelli (6305935 B1).

Quinn disclosed a bur 15 with shaft 17 having a portion 19-22 of non-circular cross section. However, Quinn fails to disclose the non-circular cross section to be a triangular cross section. Cardarelli teaches of a bur shaft having a triangular cross section for increasing rotational retention (column 3 lines 11-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the non-circular cross section portion 19-22 of Quinn's bur shaft with Cardarelli's triangular cross section bur shaft to increase rotational retention as taught by Cardarelli. Furthermore, it would also have been obvious to modify Quinn's locking socket's surface to be triangular so that it can complementarily engage with the modified triangular shaft.

7. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quinn (5924865).

Quinn disclosed a locking socket having an arm/protrusion 65 according to claims 4 and 12. However, Quinn disclosed the protrusion 65 shown to have a surface of rectangular shape. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify such protrusion to have a surface of rounded shape. Such modification would yield the same function of the protrusion to engage and lock the bur shaft. The configuration or shape of the protrusion is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular configuration of the protrusion was significant. MPEP § 2144.04.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hao D. Mai whose telephone number is (571) 270-3002. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HDM 10/15/2007

**/John J Wilson/
Primary Examiner
Art Unit 3732**